

MAQTQGTRRKVCYYYDGDVGNYYYGQGHMPKPHRIRMTHNLLN
YGLYRKMEIYRPHKANAEEMTKYHSDDYIKFLRSIRPDNMSEYSKQMQRFNVEDCPV
FDGLFEFCQLSTGGSVASAVKLNKQQTDIAVNWAGGLHHAKKSEASGFCYVNDIVLAI
LELLKYHQRVLYIDIDIHHGDGVVEAFYTTDRVMTVSFHKYGEYFPGTGDLRDIGAGK
GKYYAVNYPLRDGIDDES YEAFKPVMSKVMEMFQPSAVVLQCGSDSLSGDRLGCFNL
TIKGHAKCVEFVKSFNLPMLMLGGGGYTIRNVARCWTYETAVALDTEIPNELPYNDYF
EYFGPDFKLHISPSNMTNQNTNEYLEKIKQRLFENLRMLPHAPGVQMQAIPEDAIPEE
SGDEDEDDPDKRISICSSDKRIACEEEFSDSEEEGEGGRKNSSNFKKAKRVKTEDEKE
KDPEEKKEVTEEEKTKEEKPEAKGVKEEVKLA (SEQ ID NO:1)

FIGURE 1A

0047539.032504

0001530-03504
109220-0252100

```
1 atgtctgggg tctctgcccg ctggtgctgc tgtctcccac tcggtcatcc tgaacaca
61 gcctgagcgt cctctgtcact cggggtagac cacgcgggga ggcgagcaag atggcgaga
121 cgcagggcac ccggaggaaa gtctgttact actacgacgg gcatgttggg aattactatt
181 atggacaagg ccacccaatg aagcctcacc gaatccgcat gactcataat ttgctgtca
241 actatggtct ctaccgaaaa atggaaatct atcgccctca caaagccaat gctgaggaga
301 tgaccaagta ccacagcgat gactacatta aattcttgcg ctccatccgt ccagataaca
361 tgtcggagta cagcaagcag atgcagagat tcaacgttgg tgaggactgt ccagtattcg
421 atggcctgtt tgagtctctgt cagttgtcta ctggtggttc tgggcaagt gctgtgaaac
481 ttaataagca gcagacggac atcgctgtga attgsgctgg gggcctgcac catgcaaaga
541 agtccgaggg atctggcttc tgttacgtca atgatatcgt cttggccatc ctggaactgc
601 taaagtatca ccagaggggtg ctgtacattg acattgatat tcaccatggg gacggcgtgg
661 aagaggcctt ctacaccacg gaccgggtca tgactgtgtc ctttcataag tatggagagt
721 acttcccagg aactggggac ctacgggata tcggggctgg caaaggcaag tattatgctg
781 ttaactaccc gctccgagac gggattgatg acgagtccta tgaggccatt ttcaagccgg
841 tcatgtccaa agtaatggag atgttccagc ctagtgcggt ggtcttacag tgtggctcag
901 actccctatc tggggatcgg ttagggttgc tcaatctaac tatcaaagga cacgccaagt
961 gtgtggaatt tgtcaagagc tttaacctgc ctatgctgat gctgggaggc ggtggttaca
1021 ccattcgtaa cgttgcccgg tgcctggacat atgagacagc tgtggccctg gatacggaga
1081 tccctaatga gcttccatac aatgactact ttgaatactt tggaccagat ttcaagctcc
1141 acatcagtc tccaatatg actaaccaga acacgaatga gtacctggag aagatcaaac
1201 agcgactgtt tgagaacctt agaatgctgc cgcacgcacc tggggtccaa atgcaggcga
1261 ttectgagga cgccatccct gaggagagtg gcgatgagga cgaagacga cctgacaagc
1321 gcatctcgat ctgctcctct gacaaaagaa ttgctctgga ggaagagtcc tccgattctg
1381 aagaggaggg agaggggggc cgcaagaact ctccaactt caaaaagcc aagagagtca
1441 aaacagagga tgaaaaagag aagacccag aggagaagaa agaagtccc gagaggaga
1501 aaaccaagga ggaagaagca gaagccaaag ggtcaagga ggaagtccag ttggcctgaa
1561 tggacctctc cagctctggc ttectgctga gtccctcagg ttctcttccc c (SEQ ID NO:2)
```

FIGURE 1B

MAYSQGGGKKKVCYYYDGDIGNYYYGQGHMPKPHRIRMTNLLL
NYGLYRKMEIYRPHKATAEEMTKYHSDEYIKFLRSIRPDNMSEYSKQMHIFNVGEDCP
AFDGLFEFCQLSTGGSVAGAVKLNRRQOTDMAVNWAGGLHAKKYEASGFCYVNDIVLA
ILELLKYHQRVLYIDIDIHHGDGVVEAFYTTDRVMTVSFHKYGEYFPGTGDLRDIGAG
KGKYYAVNFPMDGIDDESYGQIFKPIISKVMEMYQPSAVVLQCGADSLSGDRLGCFN
LTVKGHAKCVEVVKTENLPLMLGGGGYTIRNVARCWYETAVALDCEIPNELPYNDY
FEYFGPDFKLHISPSNMTNQNTPEYMEKIKQRLFENLRMLPHAPGVQMQAIPEDAVHE
DSGDEDGEDPDKRISIRASDKRIACDEEFSDSEDESGEGGRNVADHKKGAKKARIEED
KKETEDIKTDVKEEDKSKDNSEKTDTKGTKSEQLSNP (SEQ ID NO:3) ..

FIGURE 2A.

0047520-022604

MAKTVAYFYDPDVGNFHYGAGHPMKPHRLALTHSLVLHYGLYKK
MIVFKPYQASQHDMCRFHSEDIIDFLQRVSPTNMQGFTKSLNAFNVGDDCPVFPGLFE
FCSRYTGASLQGATQLNNKICDIINWAGGLHHAKKFEASGFCYVNDIVIGILELLKY
HPRVLYIDIDIHHGDGVQEA FYLTDRVMTVSFHKYGN YFFPGTGDMYEVGAESGRYYC
LNVPLRDGIDDQSYKHLFQPVINQVVDFYQPTCIVLQCGADSLGCDRLGCFNLSIRGH
GECVEYVKSFNIPLLVLGGGGYTVRNVARCWTYETSLVVEEAI SEELPYSEYFEYFAP
DFTLHPDVSTRIENQNSRQYLDQIRQTIFENLKMLNHAPSVQIHDVPADLLTYDRTDE
ADAEERGPEENYSRPEAPNEFYDGDHNDKESDVEI (SEG ID NO:5)

FIGURE 3A

00047530.033504

094739 03694
T0920 82347860

```
1 ggaattcgcg gccgcggcgg gcgcggggagg tgcggggcct gctcccgcgg gaccatggc
61 caagaccgtg gcctatctct acgaccccga cgtgggcaac ttccactacg gagctggaca
121 ccctatgaag ccccatcgcc tggcattgac ccatagcctg gtccctgcatt acggtctcta
181 taagaagatg atcgtcttca agccatacca ggcctcccaa catgacatgt gccgcttcca
241 ctccgaggac tacattgact tcctgcagag agtcagcccc accaatatgc aaggtctcac
301 caagagtctt aatgccttca acgtaggcga tgactgcccc gtgtttcccg ggctcttga
361 gttctgctcg cgttacacag gcgcattctt gcaaggagca accagctga acaacaagat
421 ctgtgataat gccattactt gggctgggtg tctgcacccat gccaagaagt ttgaggcttc
481 tggcttctgc tatgtcaacg acattgtgat tggcatcctg gagctgctca agtaccaccc
541 tcgggtgctc tacattgaca ttgacatcca ccatggtgac ggggttcaag aagcttctta
601 cctcactgac cgggtcatga cgggtgctct ccacaaatgc ggaaattact tcttccctgg
661 cacaggtagc atgtatgaag tcggggcaga gagtggccgc tactactgtc tgaacgtgcc
721 cctgcgggat ggcattgatg accagagtta caagcacctt ttccagccgg ttatcaacca
781 ggtagtggac ttctaccaac ccacgtgcat tgtgctccag tgtggagctg actctctggg
841 ctgtgacga ttgggtgct ttaacctcag catccgaggg catggggaat gcgttgaata
901 tgtcaagagc ttcaatatcc ctctactcgt gctgggtggg ggtgggtata ctgtccgaaa
961 tgttgccgcg tgctggacat atgagacatc gctgctggta gaagaggcca ttagttagga
1021 gcttccctat agtgaatact tcgagtactt tgcgccagac ttccacactc atccagatgt
1081 cagcaccgcg atcgagaatc agaactcacg ccagtatctg gaccagatcc gccagacaat
1141 ctttgaaaac ctgaagatgc tgaaccatgc acctagtgct cagattcatg acgtgcctgc
1201 agacctcctg acctatgaca ggactgatga ggctgatgca gaggagaggg gtccctgagga
1261 gaactatagc aggcagagag cacccaatga gttctatgat ggagaccatg acaatgacaa
1321 ggaaagcgat gtggagattt aagagtggct tgggatgctg tgtcccaagg aatttctttt
1381 cacctcttgg aagggttggg gggaaaagga gtggtccta ggtcctggg ggtcacccca
1441 ggggtctttg ctgactctgg gaaagagtct ggagaccaca ttggttctc gaaccatcta
1501 cctgcttttc ctctctctcc caaggactga caatggtacc tattagggat gagatacaga
1561 caaggatagc tatctgggac attattggca gtgggcccct gaggcagctc ctagccccc
1621 ttgcccctta tttcttccct gcttccctcg aaccagaga tttttgaggg atgaacgggt
1681 agacaaggac tgagattgcc tctgacttcc tcttccctg ggtcttgacc ttcttcttcc
1741 ccttgcttcc agggaaagat aagagagaga gatttggaa ggtctctgct tccctaacac
1801 ctgaatccca gatgatggga agtatgtttt caagtatggg gaggatagc aatgttctg
1861 ttctcacttt tggcttctat tccattttac cactgttttt atccaataaa ctaagtcggt
1921 attttcttga cctttgatgg tttagcgggc gcgc (SEQ ID NO: 6)
```

FIGURE 33

0047530-032604

MLAMKHQQELLEHQRKLERHRQEQELEKQHREQKLQQLKNKEKG
KESAVASTEVMKMLQEFVLNKKKALAHRLNLNHCISSDPYWGKTQESSLDQSSPPQS
GVSTSYNHPVLGMYDAKDDFPLRKTASEPNLKLRSRLKQKVAERRSSPLLRRKDGPPV
TALKKRPLDVTDSACSSAPGSGPSSPNNSSGVSVAENGIAPAVPSIPAETSLAHLVA
REGSAAPLPLYTSPSLPNITLGLPATGPSAGTAGQODTERLTLPALQQRLSLFPGTHL
TPYLSTSPLERDGGAAHSPLLQHMVLLEQPPAQAPLVTGLGALPLHAQSLVGADRVSP
SIHKLROHRPLGRTQSAPLPQNAQALQHLVIQQQHQQFLEKHKQQFQQQQQLQMNKIIP
KPSEPARQPESHPEETEEELREHQALLDEPYLDRLPGQKEAHAQAGVQVKQEPIESDE
EEAEPPREVEPGQRQPSEQELLFRQQALLLEQQRIHQLRNYQASMEAAGIPVSFGGHR
PLSRAQSSPASATFPVSVQEPPTKPRFTTGLVYDTLMLKHQCTCGSSSSHPEHAGRIQ
SIWSRLQETGLRGKCECIRGRKATLEELQTVHSEAHTLLYGTPNPLNRQKLDKLLGS
LASVFVRLPCGGVGVDSDTIWTEVHSAGAARLAVGCVELVFKVATGELKNGFAVVRP
PGHAEESTPMGFCYFNSVAVAAKLLQQRLSVSKILIVDWDVHHGNGTQQAFYSDPSV
LYMSLHRYDDGNFFPGSGAPDEVGTGPGVGFNVMMAFTGGLDPPMGDAEYLAAFTVV
MPIASEFAPDVVLVSSGFDAVEGHPTPLGGYNLSARCFGYLTKQLMGLAGGRIVLLE
GGHDLTAICDASEACVSALLGNELDPLPEKVLQQRPANAVRSMEKVMETHSKYWRCL
QRTTSTAGRSLEAQTCENEEAETVTAMASLSVGKPAEKRPDEEPMEEEPPL (SEC ID NO: 7)

FIGURE 4A

0047520.032504
T0320.0254750

1	ggaggttgtg	gggcccgcgc	cgcggagcac	cgtccccgcc	gccgcccag	cccagccccg
61	agcccgcgca	cccgcccgcg	ccgcccgcgc	cgcgcgccga	acagcctccc	agcctgggccc
121	cccgggcgcg	ccgtggccgc	gtcccggctg	tcgcccgcgc	agcccagagcc	cgcgcgcccg
181	cgggtggcgg	cgcaggtga	ggagatgcgg	cgcggagcgc	cggagcaggg	ctagagccgg
241	ccgcccgcgc	ccgcccgcgt	aagcgcagcc	ccgcccgcgc	gcccgcgggc	cattgtccgc
301	cgcgcgcgc	gcccgcgcgc	cagcctgcag	gccttggzgc	ccgcccgcag	tggacgcccgc
361	cgggtccacac	ccgcccgcgc	cgcggccgtg	ggaggcgggg	gccagcgcgt	gcccgcgcgc
421	gtgggacccg	ccggtcccca	gggcccgcgc	gccccttctg	gacctttcca	cccgcgcgcgc
481	gaggcggcctt	cgcgcgcgcg	ggcggggggc	cgggggtggg	cacggcaggg	agcggcgcgc
541	tctcccgggtg	cggggcccgc	gccccccgag	caggttcatc	tgcagaagcc	agcggacgccc
601	tctgttcaac	ttgtgggtta	cctgggtcat	gagaccttgc	cggcagggct	cggcgcctga
661	acgtctgtga	cccagccctc	accgtcccgc	tacttgtatg	tgttgggtgg	agtltggzgc
721	tcgttggagc	tatcgtttcc	gtggaaattt	tgagccattt	cgaatcactt	aaaggagtgg
781	acattgctag	caatgagctc	ccaaagccat	ccagatggac	ttcttggccg	agaccagcca
841	gtggagctgc	tgaatcctgc	ccgcgtgaac	cacatgcccc	gcacggtgga	tgtggccacg
901	gcgctgcctc	tgaagtgggc	cccctcggca	gtgcccattg	acctgcgcct	ggaccaccag
961	ttctcactgc	ctgtggcaga	gccggccctg	cgggagcagc	agctgcagca	ggagctcctg
1021	gcgctcaagc	agaagcagca	gatccagagg	cagatcctca	tcgctgagtt	ccagaggcag
1081	cacgagcagc	tctcccggca	gcacgaggcg	cagctccacg	agcacatcaa	gcaataacag
1141	gagatgctgg	ccatgaagca	ccagcaggag	ctgctggaac	accagcggaa	gctggagagg
1201	caccgcccag	agcaggagct	ggagaagcag	caccgggagc	agaagctgca	gcagctcaag
1261	aacaaggaga	agggcacaaga	gagtgcctgt	gccagcacag	aagtgaagat	gaagttacaa
1321	gaatttgtcc	tcaataaaaa	gaaggcgtgt	gcccaccgga	atctgaacca	ctgcatttcc
1381	agcagaccctc	gctactggta	cgggaaaacg	cagcacagtt	cccttgacca	gagttctcca
1441	ccccagagcg	gagtgtcgac	ctcctataac	caccgcgttc	tgggaatgtz	cgacgccaac
1501	gatgacttcc	ctcttaggaa	aacagcttct	gaaccgaatc	tgaaattacg	gtccaggcta
1561	zagcagaaag	tggccgaaag	acggagcagc	cccctgttac	gcaggaaaga	cgggcccagt
1621	gtcactgtct	tazaaagcg	tccgttggat	gtcacagact	ccgctgcag	cagcgcacca
1681	ggctccggac	ccagctcacc	caacaacagc	tccgggagcg	tcagcgcgga	gaacggtatc
1741	gcgcccgcgc	tccccagcat	cccggcggag	acgagtttgg	cgcacagact	tgtggcacga
1801	gaaggctcgg	ccgctccact	tcccctctac	acatcgccat	ccttgcccaa	catcagcgtg
1861	ggcctgcctg	ccaccggccc	ctctgcgggc	acggccgggc	agcaggacac	cgagagactc
1921	acccttcccg	ccctccagca	gaggctctcc	cttttccccg	gcacccacct	cactccctac
1981	ctgagcactt	cgccttggga	cgggagcggg	ggggcagcgc	acagccctct	cttgcagcac
2041	atggtcttac	tggagcagcc	accggcacaa	gcacccctcg	tcacaggcct	gggagcactg
2101	cccctccacg	cacagtcctt	ggttgggtga	gaccgggtgt	cccctcccat	ccacaagctg
2161	cggcagcacc	gcccactggg	gcggacccag	tcggccccgc	tgccccagaa	cggccaggct
2221	ctgcagcacc	tgggtcatcca	gcagcagcat	cagcagtttc	tggagaaaca	caagcagcag
2281	ttccagcagc	agcaactgca	gatgaacaag	atcatcccca	agccaagcga	gccagcccgg
2341	cagccggaga	gccacccgga	ggagacggag	gaggagctcc	gtgagcacca	ggctctgctg
2401	gacgagccct	acctggaccg	gctgcggggg	cagaaggagg	cgcacgcaca	ggccggcggt
2461	caggtgaagc	aggagcccat	tgagagcgat	gaggaaagag	cagagccccc	acgggagggt
2521	gagccggggc	agcggcagcc	cagtgcagca	gagctgctct	tcagacagca	agccctcctg
2581	ctggagcagc	agcggatcca	ccagctgagg	aactaccagg	cgtccatgga	ggccggccgg
2641	atccccgtgt	ccttcgycgg	ccacaggcct	ctgtccccgg	cgcagtcctc	acccgcgtct
2701	gccaccttcc	ccgtgtctgt	gcaggagccc	cccaccaagc	cgaagttcac	gacaggccct
2761	gtgtatgaca	cgtgtatgct	gaagcaccag	tgacacctgc	ggagtacag	cagccacccc
2821	gagcacgccc	ggaggatcca	gagcatctgg	tcccgcctgc	aggagacggg	cctccggggc
2881	aaatgcgagt	gcattccggg	acgcaaggcc	acccctggag	agctacagac	ggtgcactcg
2941	gaagcccaca	ccctcttgta	tggcaccgaac	cccctczacc	ggcagaaact	ggacagtaag
3001	aaacttctag	gctcgctcgc	ctcgtgttct	ctccggctcc	cttgcggtgg	tgttgggggt
3061	gacagtgcga	ccatattgga	cgaagtgcat	tcggcggggg	cagcccgcct	ggctctgggg
3121	tgctgtgtag	agctcgctct	caaggtggcc	acaggggagc	tgaagaatgg	cttgcctgtg
3181	gtccgcccc	ctggacacca	tgcgagggag	agcacgcccc	tgggcttttg	ctacttcaac
3241	tccgtggccg	tggcagccaa	gcttctgcag	cagaggttga	gcgtgagcaa	gatccctcat
3301	gtggactggg	acgtgcacca	tggaaacggg	acccagcagg	cttctacag	cgaccttagc
3361	gtcctgtaca	tgtccctcca	ccgtacagac	gatgggaact	tcctccaggg	cagcggggct
3421	cctgatgagg	tgggcacagg	gcccggcggt	ggtttcaacg	tcaacatggc	cttcaccggc
3481	ggcctggacc	cccccatggg	agacgctgag	tacttggcgg	ccttcagaaac	ggtgggtcat
3541	ccgatcgcca	gcgagcttgc	cccggatgtg	gtgcgggtgt	catcaggctt	cgatgcccgt

FIGURE 4B (SHEET 1 OF 3)

3601	gagggccacc	ccacccctct	tgggggctac	aacctctccg	ccagatgctc	cgggtacctg
3661	acgaagcagc	tgatgggcct	ggctggcggc	cggatctgcc	tggccctcga	gggaggccac
3721	gacctgaccg	ccatcttgca	cgcctcggaa	gcctgtgttt	ctgcccttgc	gggaaacgag
3781	cttgatcctc	ccccagaaaa	ggtttttacag	caaagaccca	atgcaaacgc	tgtccgttcc
3841	atggagaaaag	tcatggagat	ccacagcaag	tactggcgct	gcctgcagcg	cacaacctcc
3901	acagcggggc	gttctctgat	cgaggctcag	acttgcgaga	acgaagaagc	cgaagcggtc
3961	accgccatgg	cctcgctgtc	cgtgggcgtg	aaagcccgcc	aaaagagacc	agatgaggag
4021	cccattggaag	aggagccgcc	cctgtagcac	tccctcgaag	ctgctgttct	cctgtctgtc
4081	tgtctctgtc	ttgaagctca	gccaaagaaac	tttcccgtgt	cacgcctgcg	tcccaccgtg
4141	gggctctctt	ggagcaccca	gggacaccca	gcgtgcaaca	gccacgggaa	gcctttctgc
4201	cgcccaggcc	cacaggtctc	gagacgcaca	tgcacgcctg	ggcgtggcag	cctcacaggg
4261	aacacgggac	agacgcgcgc	gacgcgcaga	cacacggaca	cgcggaagcc	aagcacactc
4321	tggcggggtcc	cgcaagggac	gccgtggaag	aaagagccct	gtggcaacag	gcggccgagc
4381	tgccgaattc	agttgacacg	aggcacagaa	aacaaatctc	aaagatctaa	taatacaaaa
4441	caaacttgat	taaaactggg	gcltaaaagt	tattaccacac	aactccacag	tctctgtgta
4501	aaccactcga	ctcatcttgt	agcttatctt	ttttttaazg	aggacgtttt	ctacggctgt
4561	ggcccgcctc	tgtgaaccat	agcgggtgtg	ggcggggggt	ctgcacccgg	gtggggggaca
4621	gagggaccct	taaagaaaac	aaaactggac	agaaacagga	atgtgagctg	ggggagctgg
4681	cttgagtctc	tcaaaaagcca	tcggaagatg	cgaagtctgt	cctttttttt	tattgctctg
4741	gcggattctt	gtggctgggt	tttctgaagt	ctgaggaaca	atgccttaaz	aaaaaacaaa
4801	cagcaggaat	cggtgggaca	gtttcctgtg	gccagccgag	cctggcagtg	ctggcaccgc
4861	gagctggcct	gacgcctcaa	gcacgggcac	cagccgtcat	ctccggggcc	aggggctgca
4921	gcccggcggt	cctgtttttg	ctttatttgt	gtttaagaaa	aatggagcta	gttccaaaaa
4981	agtggcaaat	cccgttggag	gttttgaagt	cczacaattc	ttaaacgaat	ccaaagtgtt
5041	ctcacacgtc	acatacgatt	gagcatctcc	atctggtcgt	gaagcatgtg	gtaggcacac
5101	ttgcagtgtt	acgatcggaa	tgccttttta	taaaagcaag	tagcatgaag	tattgcttaa
5161	atcttaggta	taazataaata	tatatatgta	taatatatac	tccaatgtat	tccaagctaa
5221	gaaacttacc	tgattctctat	gaaatcttga	tazaaatatt	ataatgcatt	tatagaazaa
5281	gtatatatat	atatataaaa	tgaatgcaga	ttgcgaaggc	ccctgcaaat	ggatggcttg
5341	tgaattttgct	ctcaagggtgc	ttatggzaag	gcatcctgat	tgattgaaat	ctatgttttc
5401	tcaagctcca	gatttgcctag	atttcagatc	gccaaacacat	tcgccactcg	gcaactaccr
5461	tacaagtctg	tacttccatt	ctaattattc	tctaacagaa	cgcctcccgt	ctccaagcct
5521	tcatgcacat	atgtacctaa	tgagtcttcta	tagcaaaagaa	tataaacttg	ctgttgattt
5581	ttgtatgaat	tttttccaca	aaagatccct	aataagcatc	gttttatgaa	ttttacattt
5641	tccctcacca	tttagcaatt	ttctgaatcg	taataatgtc	taaatctttt	tcccttctga
5701	attctctgatt	gtacattttt	ttttaccctt	caaaggcttt	taattatttt	tgtttctatt
5761	tttgtacgat	gagtrctctg	cagcgtacag	aatgttgtct	gtcagattct	attttcagaa
5821	agtgagagga	gggaccgtag	gtcttttctg	agtgaacca	acgattgtgt	ccttccctgg
5881	ctgtccctag	agctgtataa	agaagcccag	gggctctttt	taactttcaa	cactagtagt
5941	attacgaggg	gtgggtgtgt	tttccccctc	gtggcaaggc	caggcagggt	tgcttaggat
6001	gcccggccac	cctggggagg	ttggccagat	cggggggcag	tcagcattaa	cgaaactcat
6061	gttttaaacct	ctctgaccac	atcgtcagga	tagaattcta	acttgagtct	tccaagacc
6121	ttctgagcat	gtcagcaatg	catggggcac	acgtggggct	ccttaccacac	ttgggtcttt
6181	ccactgcagc	cacgtgccca	gccctggatt	ttggagcctg	tggctgcag	gaacccaggg
6241	acccttgttg	cctggtgaac	ctgcagggag	ggtatgattg	cctgacacag	acagccagtc
6301	tttactctct	ttctcttcaa	cagtaactga	cagtcacgtt	ttactggtaa	cttattctcc
6361	agcacatgaa	gccaccagtt	tcattccaaa	gtgtatattg	ggttcagact	tgggggcaga
6421	agttcagaca	caccgtgtct	aggagggacc	cagagccgag	tttcggagt	tggtaazgtt
6481	tacagggtag	cttctgaaat	taactcaaac	ttttgaccaa	atgagtgcag	attcttggat
6541	tcacttggtc	actgggctgc	tgatgggtcag	ctctgagaca	gtggtttgag	agcaggcaga
6601	acggctcttg	gacttgtttg	actttccctt	ccttggtggc	cactctcttg	tctgaagccc
6661	agattggcaa	gaggagcttg	tcccttcccc	attcatggca	cagagcagtg	gcagggccca
6721	gctagcaggc	tcttctggcc	tccctggcct	caattctctg	atagccctct	ggggatccct
6781	ccacctgccc	tcttaccctg	ccgtggctta	tggggaggaa	tgcattcaat	cactttttct
6841	tttcaagcag	atgactgggt	aacatggact	gttcagtggc	caggttatca	gtggggggac
6901	ttaatcttaa	tctcatctaa	atggagacg	cctctgcaaa	ggcctggcag	ggggaggca
6961	gtttcatctg	tcagctcaat	ccagcttcac</			

FIGURE 4B (SHEET 2 OF 3)

004733.032760
T0320.032760

LRQGGTLTGKFMSTSSIPGCLLGVALEGDGSPGHASLLQHVLL
LEQARQQSTLIAVPLHGQSPLVTGERVATSMRTVGKLPRHRPLSRTQSSPLPQSPQAL
QQLVMQQQHQQFLEKQKQQQLQLGKILTKTGELPRQPTTHPEETEEELTEQQEVLLGE
GALTMPREGSTESESTQEDLEEEDEEEDGEEEEDCIQVKDEEGESGAEEGPDLEPGA
GYKCLFSDAQPLQPLQVYQAPLSLATVPHQALGRTQSSPAAPGGMKSPPDQPVKHLFT
TGVVYDTFMLKHQCMCGNTHVHPEHAGRIQSIWSRLQETGLLSKCERIRGRKATLDEI
QTVHSEYHTLLYGTSPNLRQKLD SKKLLGPISQKMYAVLPCGGIGVDSDTVWNEHSS
SAVRMAVGCLLELAFKVAAGELKNGFAIIRPPGHAEESTAMGFCFFNSVAITAKLLQ
QKLNVGKVLIVDWDIHHGNGTQQAFYNDPSVLYISLHRYDNGNFFPGSGAPEEVGGGP
GVGYNVNVAWTGGVDPPIGDVEYLTAFRTVVMPIAHEFSPDVVLVSAGFDAVEGHLSP
LGGYSVTARCFGHLTRQLMTLAGGRVVLALLEGGHDLTAICDASEACVSALLSVELQPL
DEAVLQQKPNINAVATLEKVIETQSKHWSCVQKFAAGLGRSLREAQAGETEEAETVSA
MALLSVGAEQAAQAAAAREHSRPAEPEMEQEPAL (SEQ ID: No: 9)

FIGURE 5A

2641 ttggtcacca agaaggcacc ccaaccagcc aaacctaggt tagctgagcg gatgaccaca
2701 cgagaaaaga aggttctgga agcaggcatg gggaaagtca cctcggcac atttggggaa
2761 gagtccactc caggccagac taactcagag acagctgtgg tggccctcac tcaggaccag
2821 cctcagagg cagccacagg gggagccact ctggcccaga ccatttctga ggcagccatt
2881 gggggagcca tgctgggcca gaccacctca gaggaggctg tcgggggagc cactccggac
2941 cagaccacct cagaggagac tgtgggagga gccattctgg accagaccac ctgagaggat
3001 gctgttgggg gagccacgt gggccagact acctcagagg aggctgtagg aggagctaca
3061 ctggcccaga ccctctcgga ggcagccatg gagggagcca cactggacca gactacgtca
3121 gaggaggctc cagggggcac cgagctgatc caaactctc tagcctcgag cacagaccac
3181 cagaccccc caacctacc tgtgcaggga actacacccc agatatctc cagtacactg
3241 attgggagtc tcaggacctt ggagctaggc agcgaatctc agggggcctc agaatctcag
3301 gcccaggag aggagaacct actaggagag gcagctggag gtcaggacat ggctgattcg
3361 atgctgatgc agggatctag gggcctcact gatcaggcca tattttatgc tgtgacacca
3421 ctgcccgtgt gtcgccattt ggtggcagta tgcccatac ctgcagcagg cctagacgtg
3481 acccaacctt gtggggactg tggaacaatc caagagaatt ggggtgtgtct ctcttgctat
3541 caggtctact gtggctgta catcaatggc cacatgctcc aacaccatgg aaattctgga
3601 caccgctgg tctcagcta catcgacctg tcagcctggt gttactactg tcaggcctat
3661 gtccaccacc aggtctctct agatgtgaag aacatgccc accagaacaa gtttggggag
3721 gatatgcccc acccacacta agcccagaa tacggctcct ctccacctc tgaggcccac
3781 gatagaccag ctgtagctca ttccagcctg taccttggat gaggggtagc ctcccactgc
3841 atcccatctt gaatatctt tgeaactccc caagagtgtt tatttaagt ttaatacttt
3901 taagagaact gcgacgatta attgtggatc tccccctgcc cattgcctgc ttgaggggca
3961 ccaactactc agcccagaag gaaagggggg cagctcagtg gcccgaagag ggagctgata
4021 tcatgaggat aacattggcg ggaggggagt taactggcag gcatggcaag gttgcatalg
4081 taataaagta caagctgtt (SEQ ID NO. 12)

FIGURE 6B
(Sheet 2 of 2)

1 ataataccta cettgcagga ccacgacagg attaagtgag gaaaaacccc catgagagtg
61 ttttgccatt gtcaagtgag cctgagggag gctgaggggg gatcaggctg tatcatgccc
121 ccgaggacaa actttccagt ttacctgct cctctctct gtccttaggc tgccccaggc
181 cctgtgcaga cacaccaggc cctcagccgc agcccatgga cctgcgggtg ggccagcggc
241 cccagtgga gccccacca gageccacat tgctggccct gcagcgtccc cagcgcctgc
301 accaccacct ctcttagca ggcctgcagc agcagcgtc ggtggagccc atgaggctct
361 ccatggacac gccgatgccc gagttgcagg tgggacccca ggaacaagag ctgcggcagc
421 ttctccacaa ggacaagagc aagcgaagtg ctgtagccag cagcgtggtc aagcagaagc
481 tagcggaggt gattctgaaa aaacagcagg cggccctaga aagaacagtc catcccaaca
541 gcccggcat tccctacaga acctggagc cctggagac ggaaggagcc acccgtcca
601 tgctcagcag cttttgect cctgttcca gcctgcccag tgacccccca gagcacttc
661 ctctgcgcaa gacagtctct gagcccaacc tgaagctgcg ctataagccc aagaagtc
721 tggagcggag gaagaatcca ctgctccgaa aggagagtg gccccccagc ctccggcggc
781 ggcccgcaga gacctcgga gactctccc caagtagtag cagcacgccc gcacagggt
841 gcagctccc caatgacagc gagcacggcc ccaatcccat cctgggcgac agtgaccgca
901 ggaccatcc gactctgggc cctcgggggc caatcctggg gagccccac actccctct
961 tctgccccca tggcttgag cccgaggctg ggggcacctt gccctctgc ctgcagccca
1021 ttctctctt ggacctca ggtctcatg cccgctgct gactgtgccc gggcttgggc
1081 ccttgccctt ccactttgc cagtcctta tgaccaccga gcggctctct gggtcaggcc
1141 tccactggcc actgagccgg actcgtcag agccctgccc cccagtgcc accgctccc
1201 caccgcccgg cccatgcag cccgcctgg agcagctcaa aactcacgtc caggtgatca
1261 agaggtcagc caagccgagt gagaagcccc ggtgcgggca gataccctcg gctgaagacc
1321 tggagacaga tggcggggga ccgggcccagg tgggtggacga tggcctggag cacagggagc
1381 tgggccaatgg gcagcctgag gccagaggcc ccgtctctct ccagcagcac cctcaggtgt
1441 tgctctggga acagcagcga ctggctgggc ggctcccccg gggcagcacc ggggacactg
1501 tgctgcttc tctggcccag ggtgggcacc ggctctgtc ccgggctcag tcttcccag
1561 ccgcacctgc ctactgtca gcccagagc ctgccagcca ggcccagtc ctctccagct
1621 cagagacccc tgccaggacc ctgccctca ccacagggt gatctatgac tcggctatgc
1681 tgaagcaca gtgtctctgc ggtgacaaca gcaggcacc ggagcacgcc ggccgcatcc
1741 agagcatctg gtccggctg caggagcggg ggctccggag ccagtgtgag tgtctccgag
1801 gccggaaggc ctccctggaa gagctgcagt cggctccact tgagcggcac gtgtctct
1861 acggcaccaa cccgtcagc cgcctcaaac tggacaacgg gaagctggca gggctcctgg
1921 cacagcggat gtttgagatg ctgccctgtg gtgggggttg ggtggacact gacaccatct
1981 ggaatgagct tcatctcc aatgcagccc gctgggccc tggcagtgt actgacctg
2041 ccttcaaagt ggcttctgt gagctaaaga atggttctc tgtggtgcgg ccccaggac
2101 accatgcaga tcatcaaca gccatgggt tctgcttct caactcagt gccatgcct
2161 gccggcagct gcaacagcag agcaaggcca gcaaggccag caagatctc attgtagact
2221 gggacgtgca ccatggcaac ggcaccagc aaaccttcta ccaagacccc agtgtgctct
2281 acatctcct gcacgccat gacgacggca acttctccc ggggagtggt gctgtggatg
2341 aggtaggggc tggcagcggg gagggcttca atgtcaatgt ggccctgggt ggaggtctgg
2401 acccccccat gggggatct gagtacctgg ctgcttcag gatagtcgt atgcccacg
2461 cccgagagtt ctctccagc ctagtctgg tgtctgctgg atttgatgt gctgagggtc
2521 acccgcccc actgggtggc taccatgtt ctgccaatg ttttgatac atgacgcagc
2581 aactgatgaa cctggcagga ggcgcagtg tctggcctt ggaggggtgg catgacctca

Figure 7A (sheet 1/2)

1 meepeepads gqslvpvyiy speyvsmcde lakipkrasm vhsleayal hkqmrivkpk
61 vasmematf htdaylqhlq kvsqegdddh pdsieygly dcpategifd yaaaiggati
121 taaqlidgm ckvainwsgg whhakkdeas gfcylndavl gilrrrkfe rilyvdldlh
181 hgdgvedafs ftskvmtvsl hkfspgffpg tgdvsvdvglg kgryysvnvp iqdgideky
241 yqicesvlke vyqafnpkav vlqlgadtia gdpmsfnmt pvgigkclky ilqwqlatli
301 lggggynlan tarcwtyltg vilgktsse ipdhefftay gpdyvletp scrpdrneph
361 riqqilnyik gnlkhvv (SEQ ID NO:15)

FIGURE 8A

FIGURE 8A

Figure 9A

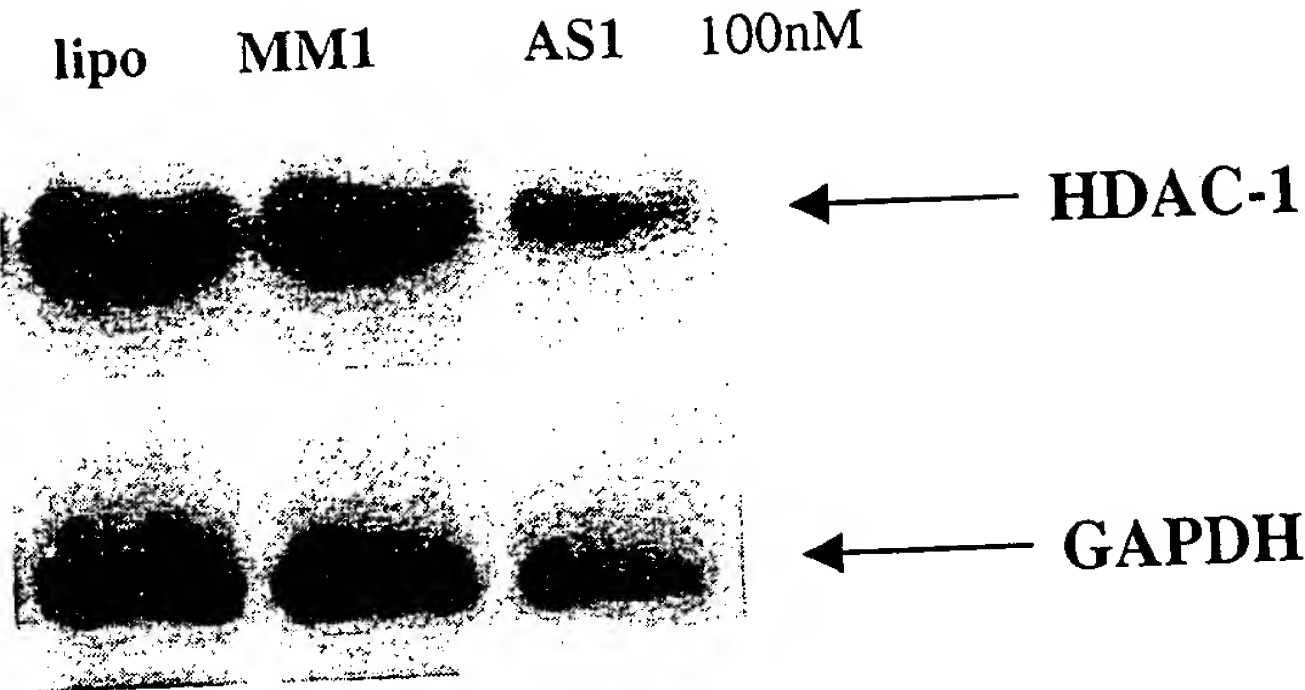


Figure 9B

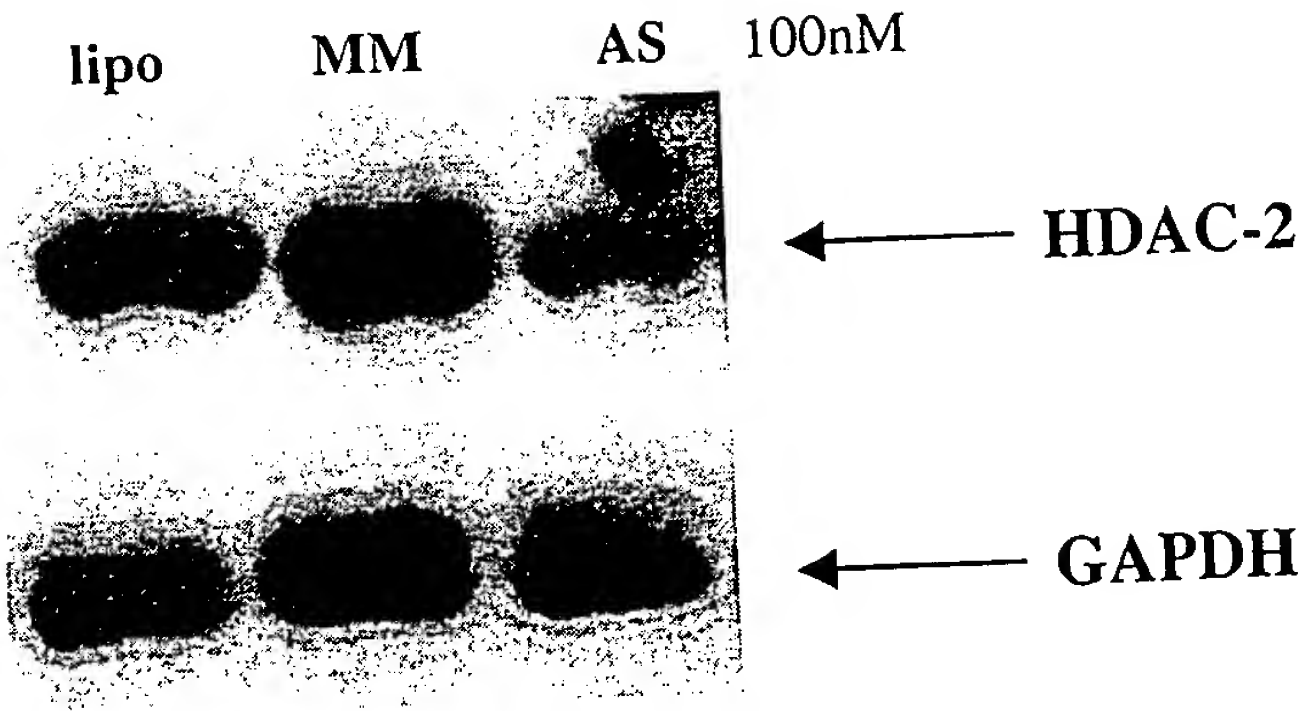


Figure 9C

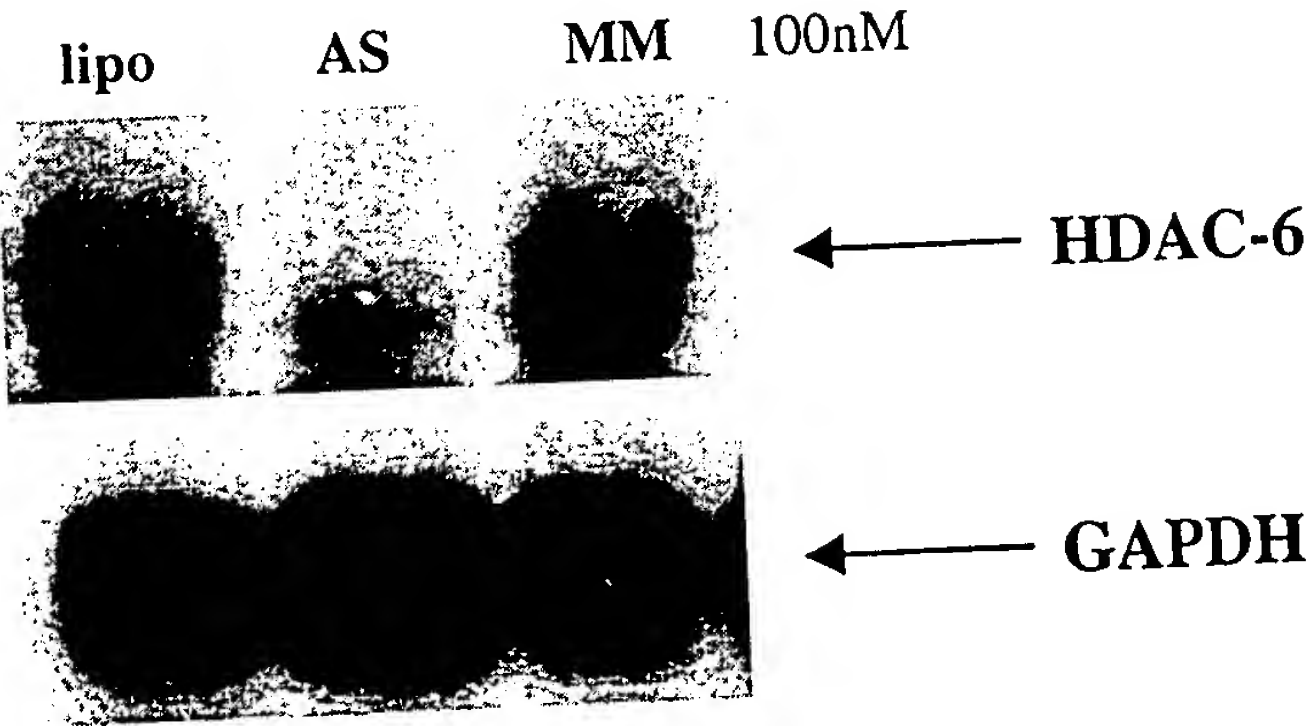


Figure 9 D

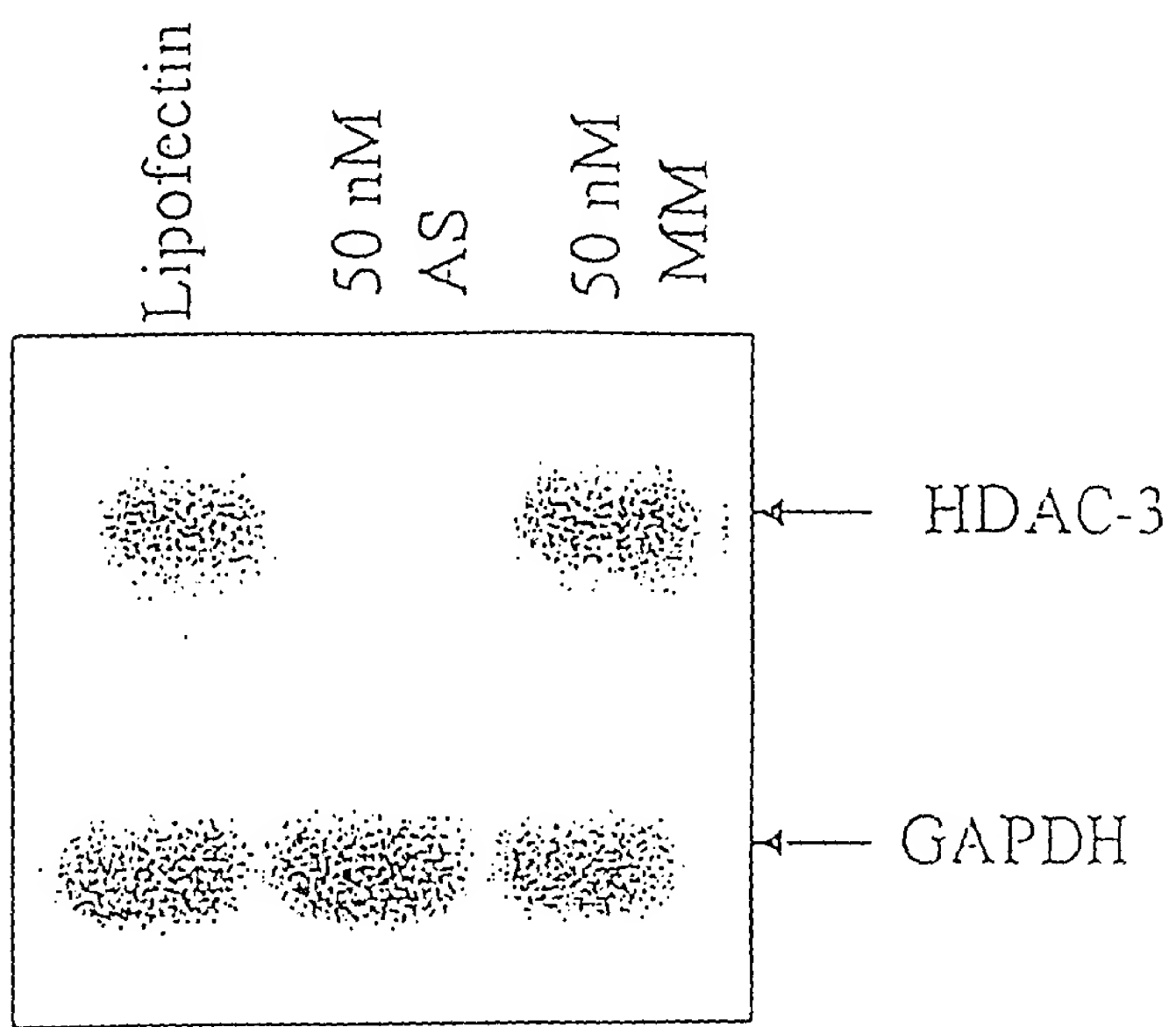


Figure 9 E

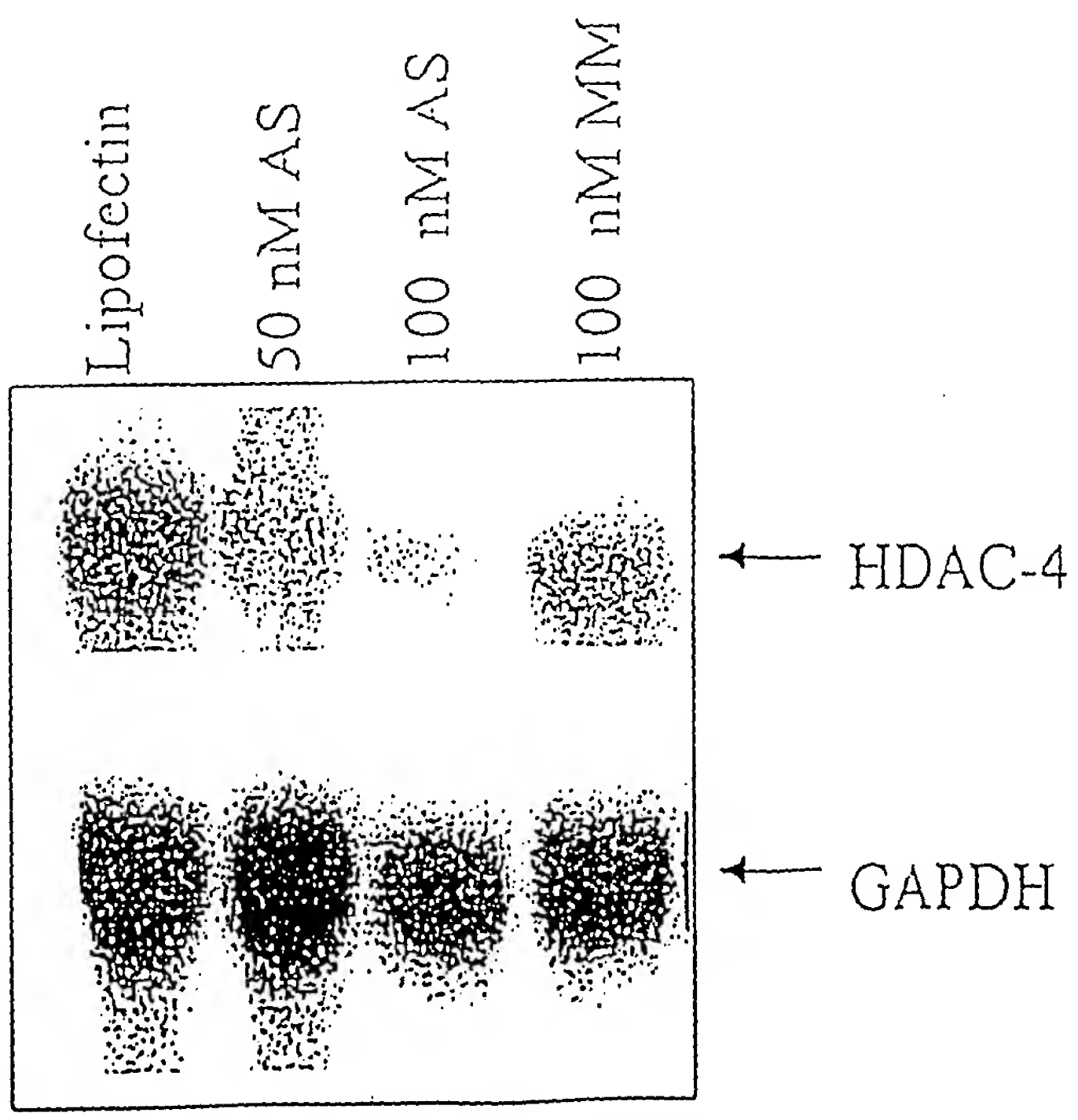


FIGURE 9 F

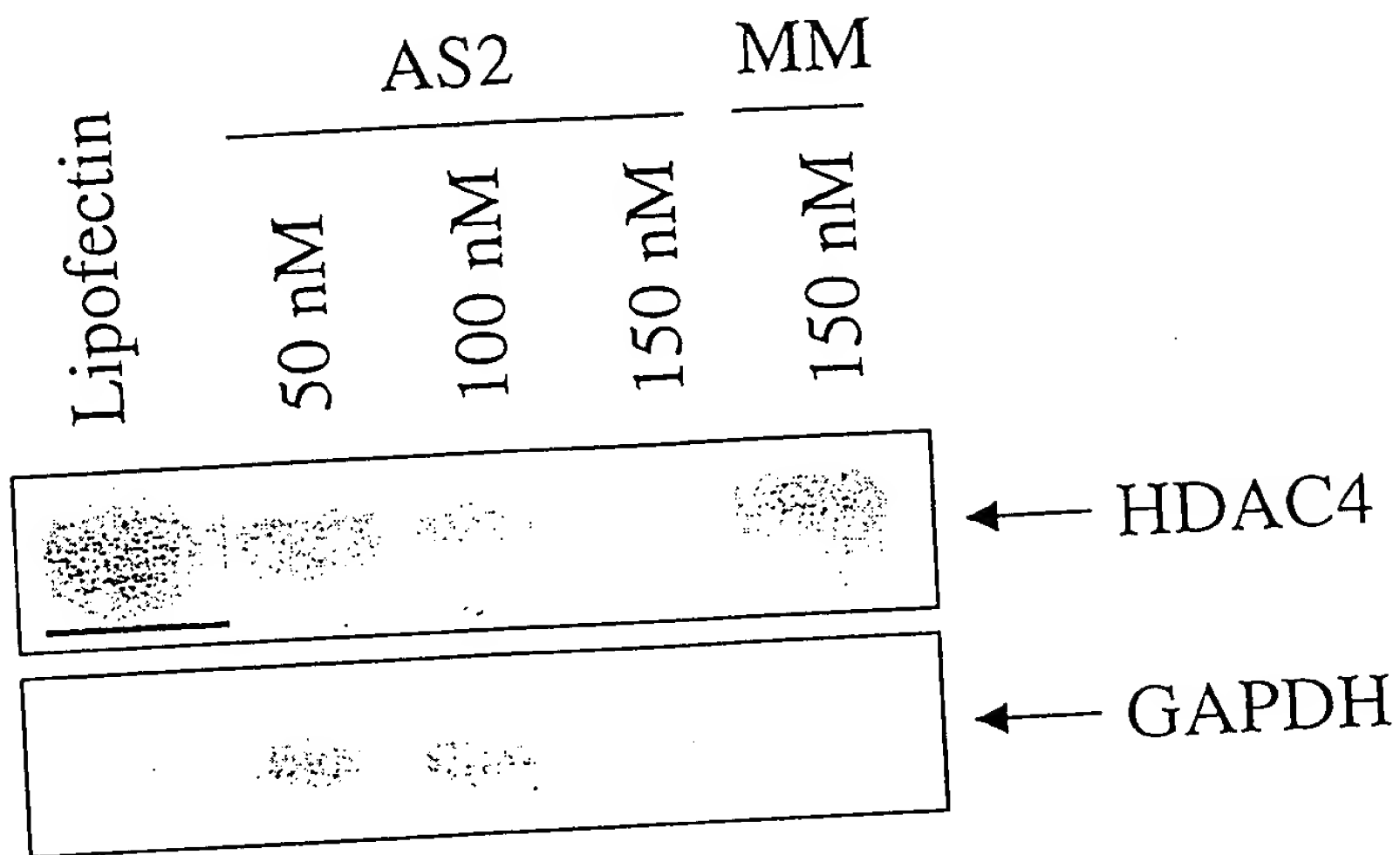


FIGURE 9 G

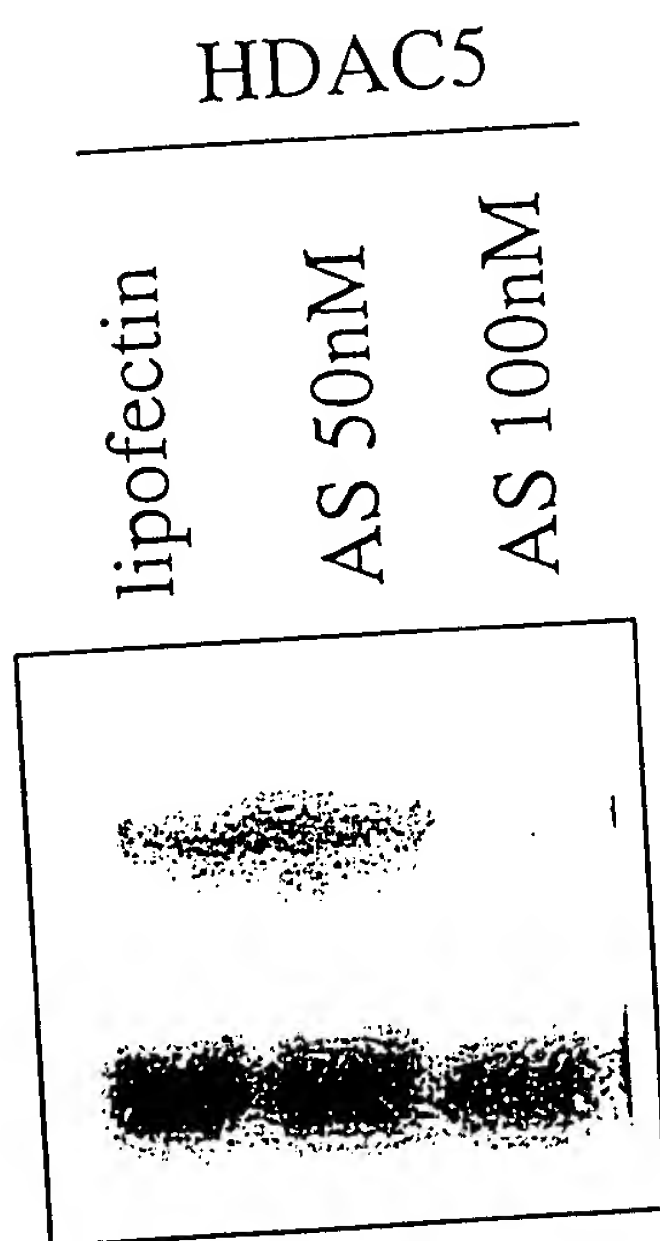


FIGURE 9 H

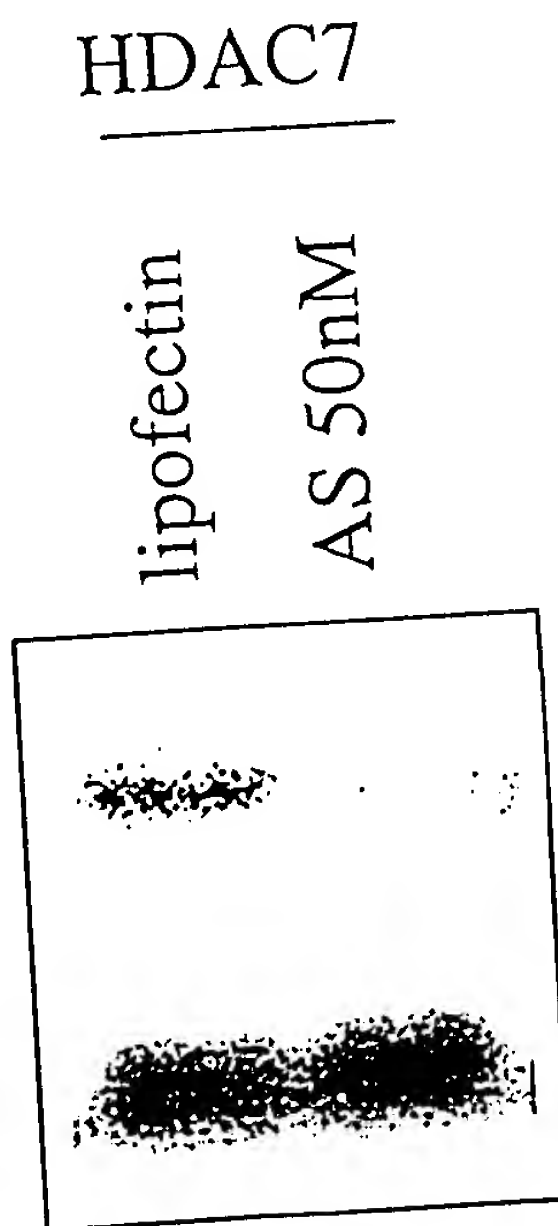


Figure 9I

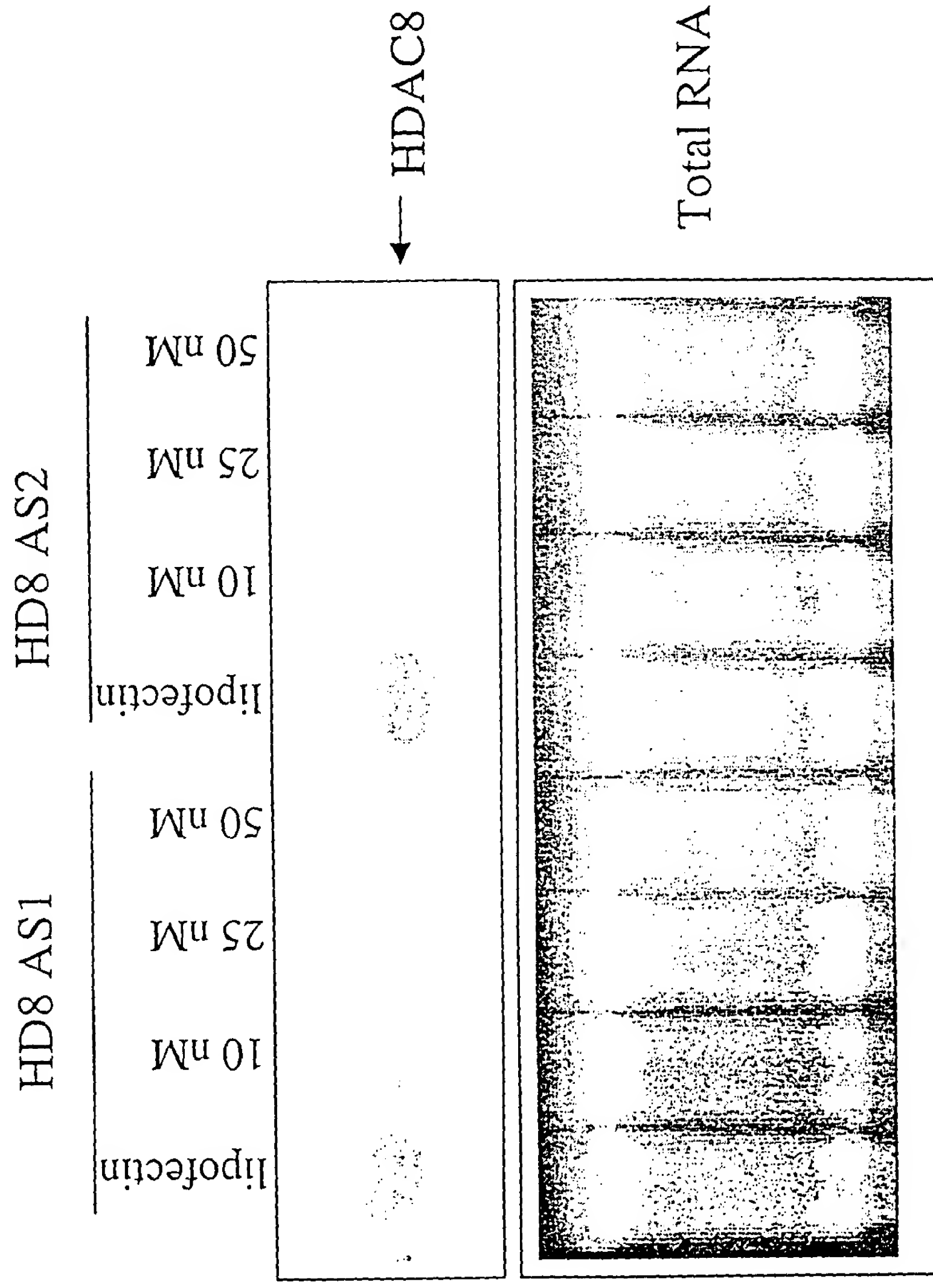
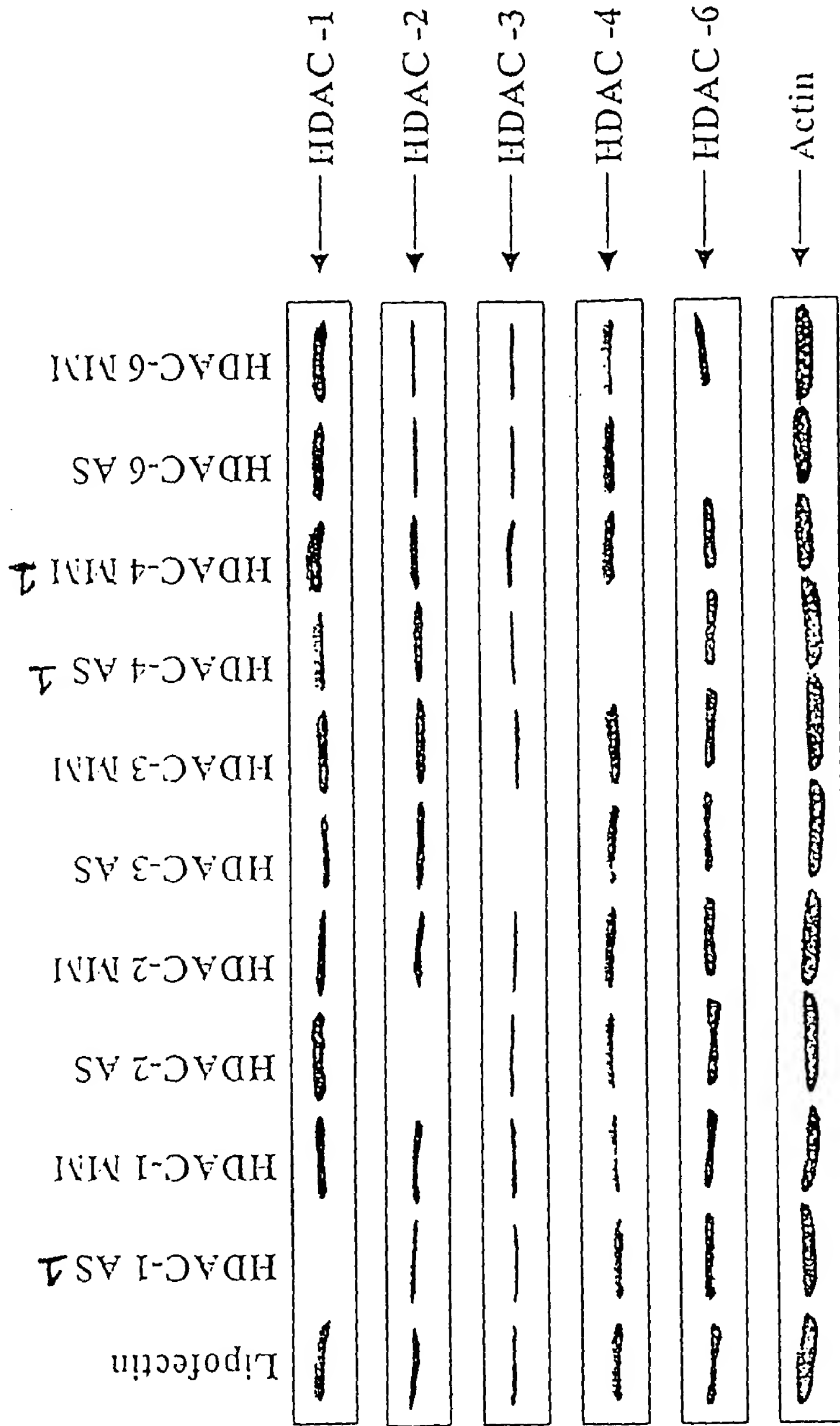
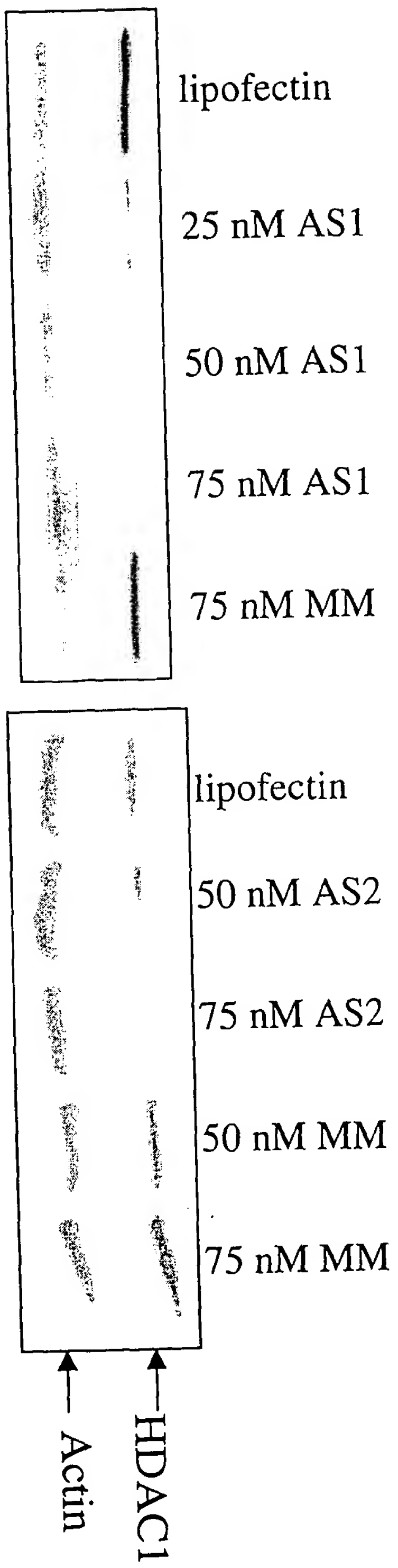


Figure 10 A



AS = Antisense
MM = Mismatch
NS = Non-specific control
3 day treatment
Oligonucleotide conc. = 50nM

FIGURE 10B



00047E28.032604

094733-03264

FIGURE 11

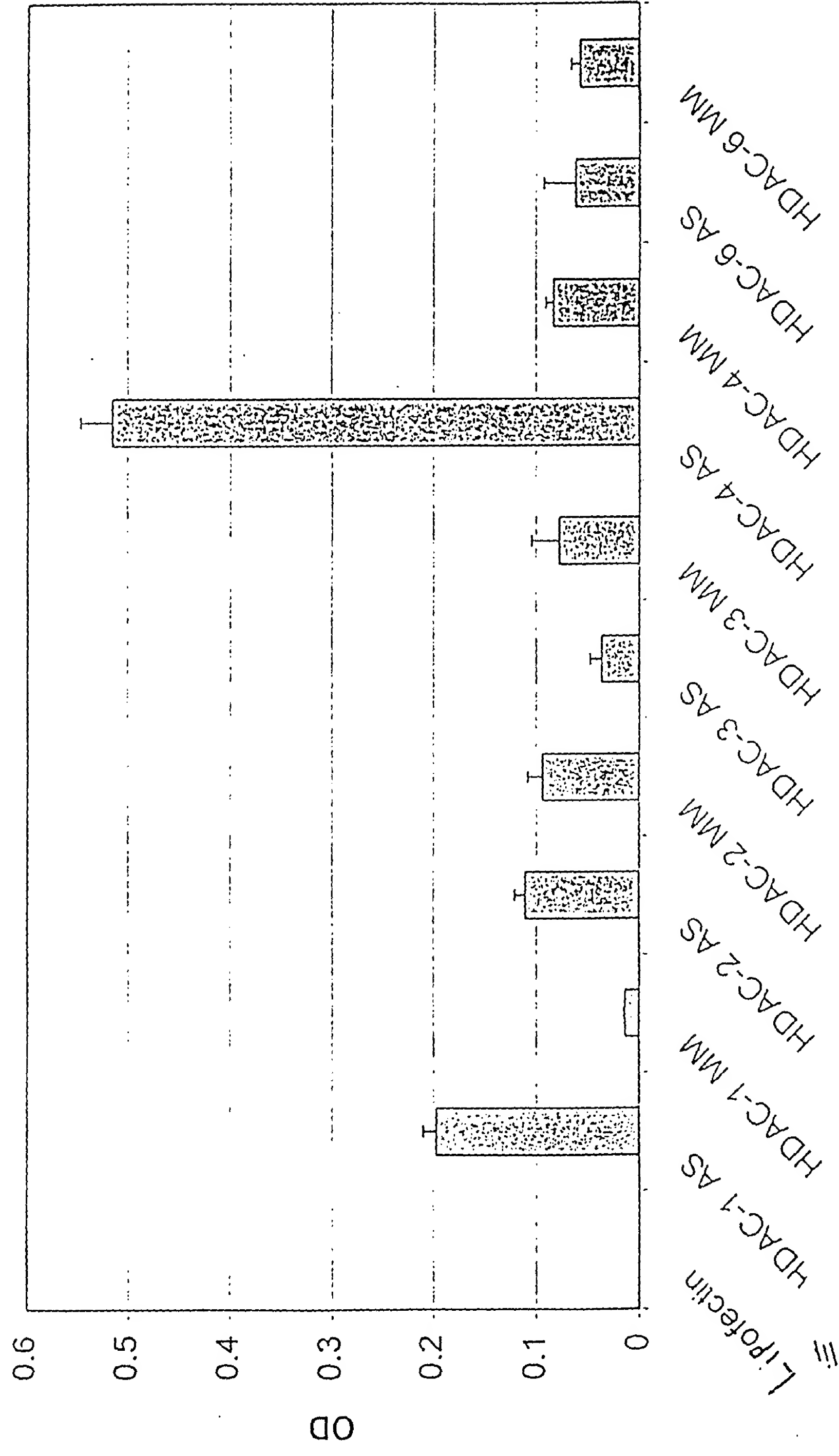


FIGURE 12A

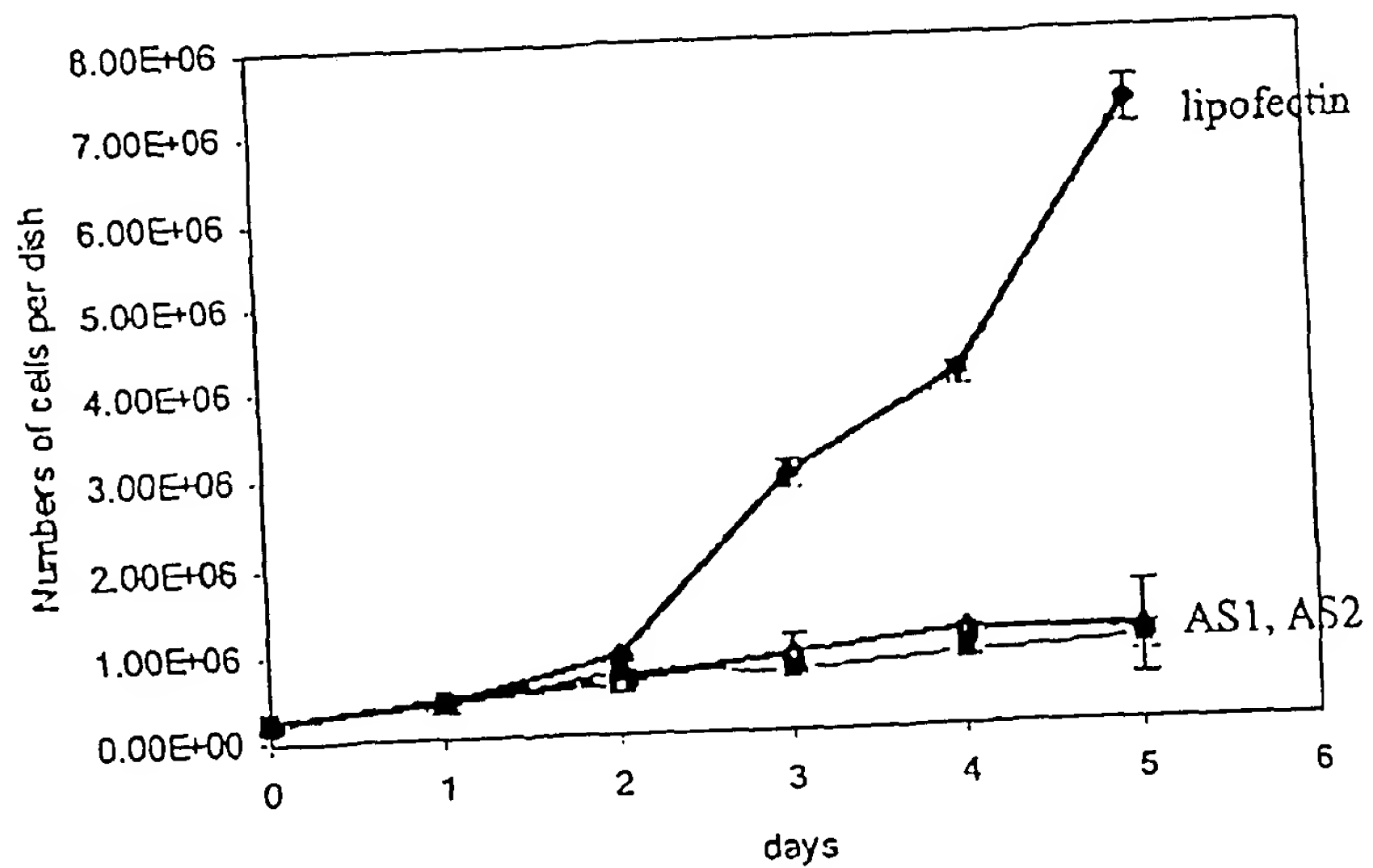
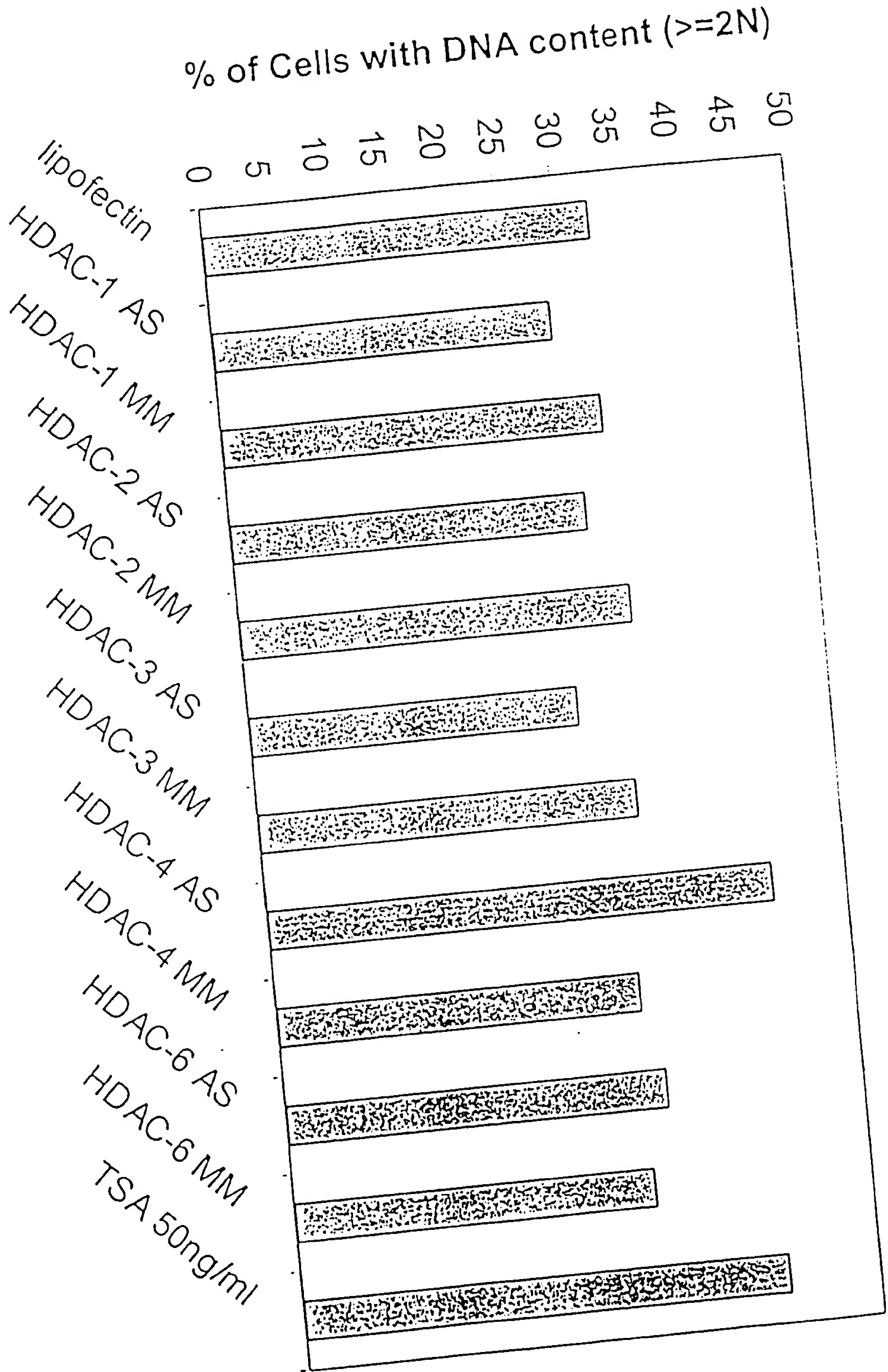
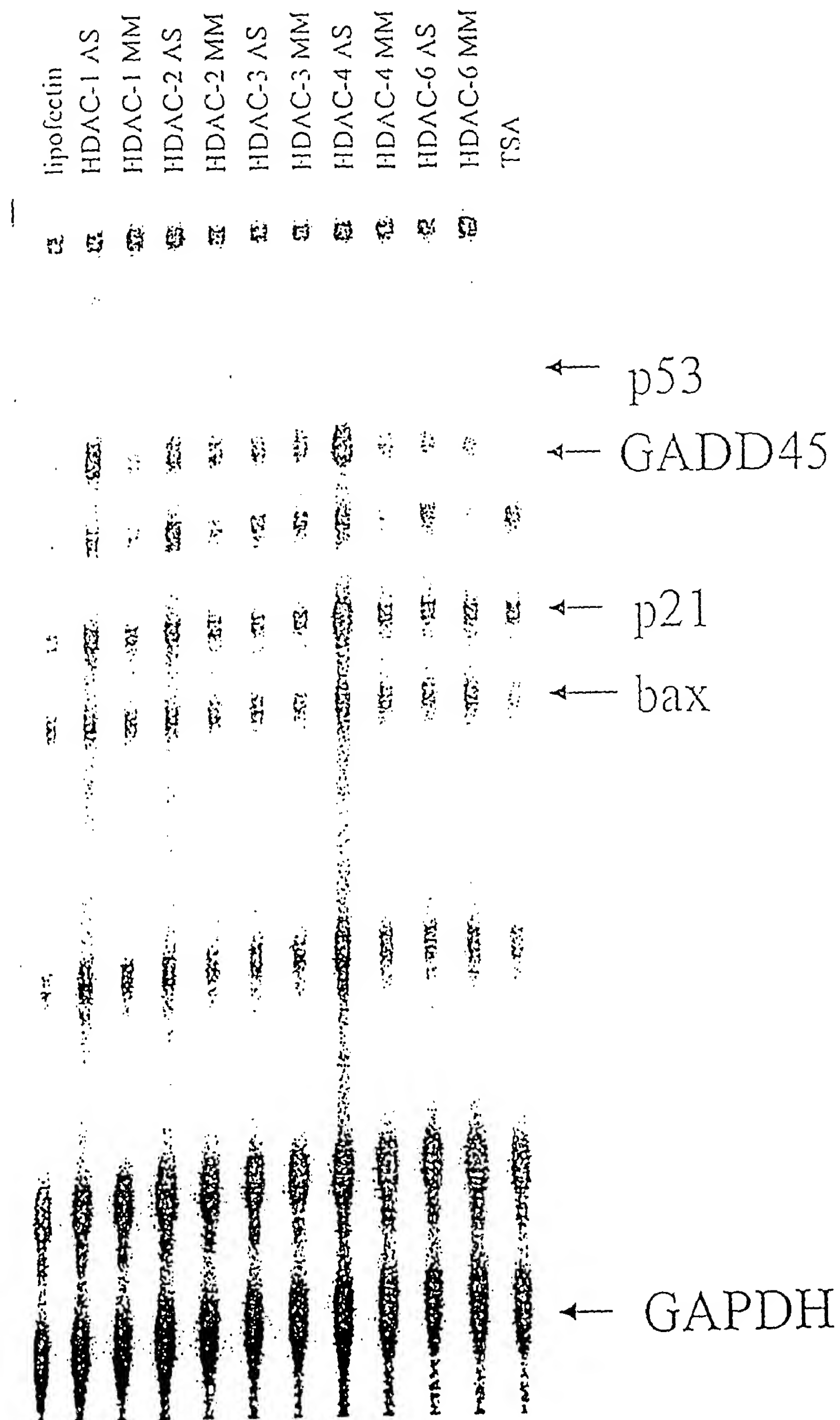


FIGURE 13



00017528 030604



TOBACCO BEET

FIGURE 15

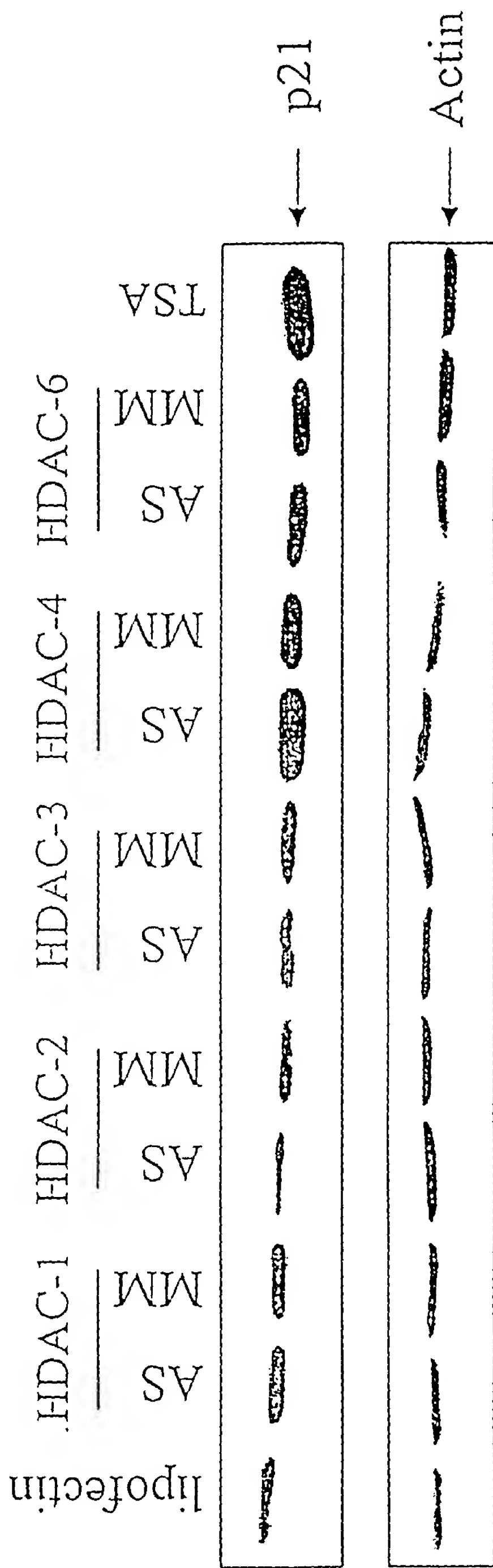


FIGURE 16

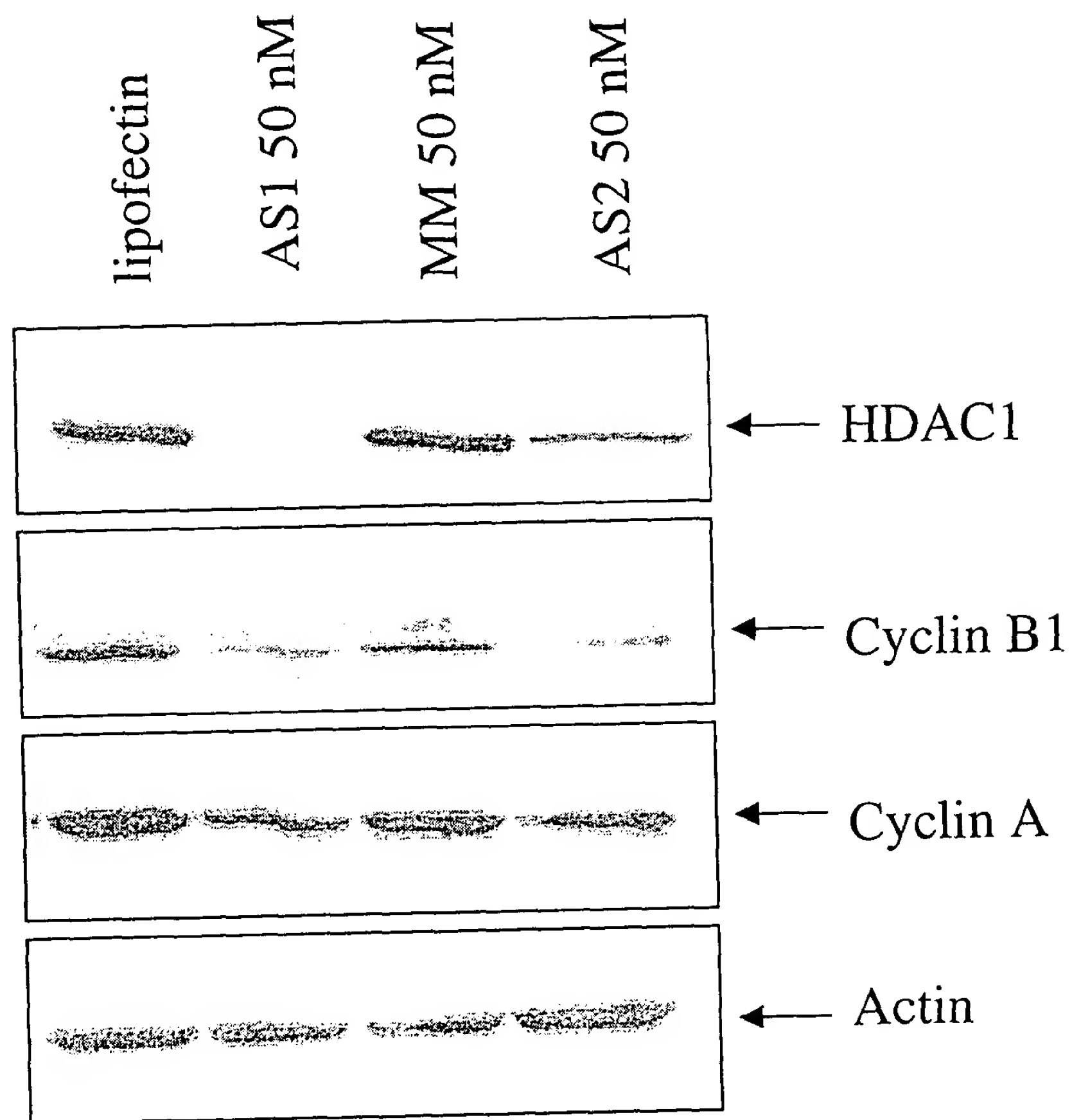


Figure 17

